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OK

WATER QUALITY MEMORANDUM Utah Coal Regulatory Program

August 16, 2012

TO: Internal File

THRU: Steve Christensen, Permit Supervisor *SKC*

FROM: April A. Abate, Environmental Scientist III *AAA 8/21/2012*

RE: 2012 First Quarter Water Monitoring, Canyon Fuel Company, LLC, SUFCO Mine, C/041/0002, WQ12-01, Task ID #4032

The SUFCO Mine is an operating longwall mine. Current operations are in the Quitchupah and Muddy Tracts. Water monitoring requirements can be found in Section 7.3.1.2 of the MRP, see Tables 7-2, 7-3, 7-4, 7-5, and 7-5A. Page 7-48 contains the important statement that (non Box-Canyon, non-UPDES) "monitoring sites are sampled three times per year," meaning the second, fourth, and fourth quarters.

SUFCO has added two additional stream monitoring points to their plan: SUFCO 006A and SUFCO 006B are intended to monitor the upstream and downstream flow along the South Fork of Quitchupah Creek on a quarterly basis and every two weeks while mining is taking place within a 15-degree angle of draw of the stream channel.

Additional monitoring is taking place in the West Lease area with new monitoring locations GW-8 and GW-9 established for Lizonbee Springs, Mud Spring and Broad Hollow Spring.

1. Was data submitted for all of the MRP required sites?

Springs

YES ☐

NO ☐

The MRP requires the Permittee to monitor 29 springs during the second, third, and fourth quarter as per Table 7-2. Some require full laboratory analysis according to Table 7-4, while others simply require field measurements.

Not applicable. No springs are required to be monitored during the first quarter of 2012.

Streams

YES ☐ NO ☐

The MRP requires the Permittee to monitor 20 streams during the second, third and fourth quarter as per Table 7-2. Perennial stream monitoring of Box Canyon is required at FP-1 and FP-2 at the beginning of the month of October each year.

Not applicable. No streams are required to be monitored during the first quarter of 2012.

Wells

YES ☒ NO ☐

The MRP requires the Permittee to monitor water levels for 7 wells. Monitoring wells US-80-2, 89-20-2W, US-81-4, US-81-3 and 01-8-1 are monitored quarterly. Monitoring wells US-80-4 and US-79-13 are monitored annually during the 3rd quarter. Groundwater monitoring at the Waste Rock site occurs three times per year.

No wells were required to be gauged according to the monitoring plan during the first quarter of 2012.

UPDES

The UPDES Permit/MRP require bi-weekly monitoring of 3 outfalls: UT0022918-001: mine water discharge to Spring Canyon; UT0022918-002: sedimentation pond discharge to Spring Canyon; and UT0022918-003A: the mine water discharge to the North Fork of Quitchupah Creek.

The Permittee submitted all required samples for the UPDES sites. Outfall 001 reported no flow this quarter. The mine water discharge outfall locations that did report data reported the following:

	SED POND Q TO E SPRING CYN Outfall: UT0022918-002	Mine Water Discharge to N.Fk. Quitchupah Outfall: UT0022918-003A
Average Flow (gpm)	57	1793
Average TDS (mg/L)	876	662

All data reported were within the compliance requirements of the UPDES Permit No. UT0022918.

2. Were all required parameters reported for each site?

YES ☒ NO ☐

3. Were any irregularities found in the data?

YES ☒ NO ☐

Flow rates for the following sample locations reported results outside of at least two standard deviations:

Sample ID	Date	Parameter	Value	STD. Deviation
UT0022918-002	2/9/2012	Flow	72.35	<2.18
	3/27/2012	Flow	93.25	<2.96
UT0022918-003A	2/22/2012	Flow	1177	>2.10

Notes: *results are in mg/L

4. On what date does the MRP require a five-year re-sampling of baseline water data.

There is no commitment in the MRP to resample for baseline parameters.

5. Based on your review, what further actions, if any, do you recommend?

No recommendations are warranted at this time.